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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,474	02/27/2002	Irena Bronstein	4085-252-27 CONT	5776

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PIPER MARBURY RUDNICK & WOLFE LLP
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EXAMINER

STRZELECKA, TERESA E

ART UNIT	PAPER NUMBER
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1637

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/083,474	BRONSTEIN ET AL.	
	Examiner	Art Unit	
	Teresa E Strzelecka	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-24 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 7, 8, 10-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>7/6/2004</u> |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This office action is in response to an amendment filed August 6, 2004. Claims 7-9 were previously pending, with claim 9 withdrawn from consideration. Applicants amended claims 7-9 and added new claims 10-15. Before the claims can be considered on the merit Applicant is presented with an Election/Restriction requirement.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 7, 8, 11 (in part), 12, 14, 20, 21 (in part), 22 and 24, drawn to a composition comprising a support, a plurality of oligonucleotides bound to the support wherein one of the nucleotides is bonded to a chemiluminescent precursor, where the precursor is bonded to the oligonucleotide directly and wherein the precursor can be converted to a chemiluminescent moiety which is a 1,2 dioexatane is bonded to the oligonucleotide directly, classified in class 536, subclass 25.32, for example.
 - II. Claims 7, 8, 11 (in part), 13, 14, 20, 21 (in part), 23 and 24, drawn to a composition comprising a support, a plurality of oligonucleotides bound to the support wherein one of the nucleotides is bonded to a chemiluminescent precursor, where the precursor is bonded to the oligonucleotide through a linker group and wherein the precursor can be converted to a chemiluminescent moiety which is a 1,2 dioexatane is bonded to the oligonucleotide through a linker group, classified in class 536, subclass 25.32, for example.
 - III. Claim 10 (in part), drawn to the composition of claim 7 where the precursor is presented by the formula on page 2, with T being the adamantyl group, Ar being an

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aromatic hydrocarbon and X being the phosphonate ester, classified in class 549, subclass 216, for example.

- IV. Claim 10 (in part), drawn to the composition of claim 7 where the precursor is presented by the formula on page 2, with T being the adamantyl group, Ar being an aromatic hydrocarbon and X being the enol ether, classified in class 549, subclass 510, for example.
- V. Claim 10 (in part), drawn to the composition of claim 7 where the precursor is presented by the formula on page 2, with unspecified T, Ar and X, classified in class 549, subclass 220, for example.
- VI. Claims 15 (in part) and 19, drawn to the composition of claim 7 where the precursor has the formula I and all of the R groups are hydrocarbon groups only (alkyl, cycloalkyl, aryl, aralkyl), and X is a direct bond to the oligonucleotide, classified in class 585, subclass 310, for example.
- VII. Claims 15 (in part) and 18, drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is heteroalkyl, heteroaralkyl, heteroaryl, hydroxyaryl, substituted hydroxyaryl, acyloxyaryl, substituted acyloxyaryl, and aryloxy, and X is a direct bond to the oligonucleotide, classified in class 568, subclass 300, for example.
- VIII. Claim 15 (in part), drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is siloxyaryl, or substituted siloxyaryl, and X is a direct bond to the oligonucleotide, classified in class 556, subclass 9, for example.

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- IX. Claim 15 (in part), drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is aminoaryl, or substituted aminoaryl, and X is a direct bond to the oligonucleotide, classified in class 564, subclass 1, for example.
- X. Claim 15 (in part), drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is sulfonamidoaryl, or substituted sulfonamidoaryl, and X is a direct bond to the oligonucleotide, classified in class 568, subclass 18, for example.
- XI. Claims 15 (in part), 16, 17 and 19, drawn to the composition of claim 7 where the precursor has the formula I and all of the R groups are hydrocarbon groups only (alkyl, cycloalkyl, aryl, aralkyl), and X is a linking group bonded to the oligonucleotide, classified in class 585, subclass 310, for example.
- XII. Claims 15 (in part), 16, 17 and 18, drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is heteroalkyl, heteroaralkyl, heteroaryl, hydroxyaryl, substituted hydroxyaryl, acyloxyaryl, substituted acyloxyaryl, and aryloxy, and X is a linking group bonded to the oligonucleotide, classified in class 568, subclass 300, for example.
- XIII. Claim 15 (in part), 16 and 17, drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is siloxyaryl, or substituted siloxyaryl, and X is a linking group bonded to the oligonucleotide, classified in class 556, subclass 9, for example.
- XIV. Claim 15 (in part), 16 and 17, drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is aminoaryl, or

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substituted aminoaryl, and X is a linking group bonded to the oligonucleotide, classified in class 564, subclass 1, for example.

XV. Claim 15 (in part), 16 and 17, drawn to the composition of claim 7 where the precursor has the formula I and at least one of the R groups is sulfonamidoaryl, or substituted sulfonamidoaryl, and X is a linking group bonded to the oligonucleotide, classified in class 568, subclass 18, for example.

XVI. Claims 15 (in part), drawn to the composition of claim 7 where the precursor has the formula I and the R groups can be any groups or group combinations not specified in Groups VI-XV, classified in class 568, subclass 1, for example.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I-XVI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each Group listed above is directed to or involves the use of compounds which are recognized in the art as being distinct from one another because of their diverse chemical structure. Further, given the rebuttable presumption that chemical compounds that are not similar in structure are not presumed to function similarly, the claimed compounds are expected to have different chemical properties, modes of action, different effects, and reactive conditions (MPEP 806.04, MPEP 808.01). Additionally, considering the level of skill in the art, it does not appear that the compounds in one group would have been obvious over the compounds in another Group.

These compounds are chemically recognized to differ in structure and function, and the recognized chemical diversity can be seen by the various classification of these compounds, such as in various subclasses of class 549, 585, 556, 564 and class 568. These compounds are independent

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and distinct from one another due to their diverse chemical structure, their expected different chemical properties, modes of action, different effects and reactive conditions.

In addition, because of the different classification of each Group based upon the distinct chemical compounds, a serious burden is imposed on the examiner to perform a complete search of the defined areas in both the patent and non-patent literature. Therefore, because of the reasons given above, the restriction set forth is proper and not to restrict would impose a serious burden in the examination of this application.

4. Claims 7, 8 and 10-24 are generic to a plurality of disclosed patentably distinct species comprising a multitude of chemiluminescent precursors. Applicant is required under 35 U.S.C. 121 to elect a single species in the elected group, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa E Strzelecka whose telephone number is (571) 272-0789. The examiner can normally be reached on M-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 13, 2004

Teresa Strzelecka

Teresa Strzelecka
Patent Examiner